

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 3

The listing of the claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Please cancel claims 16, 58-67, 83 and 121-133.

Please amend claims 17, 19, 24, 32, 33, 84, 86, 89, 90 and 94-98.

Please add new claims 134-153.

1. - 15. (Previously Cancelled)

16. (Cancelled)

17. (Currently Amended) The sortation system in claim 16 A sortation system, comprising:

a sorter including a continuous member defining a plurality of transport positions of said continuous member;

a plurality of sort destinations for receiving product discharged from said continuous member;

an induction system comprising at least two induction units, each of said induction units having a receiving end for receiving product from a product source and a discharge end for discharging product to said continuous member; and

a control determining gap between product that will be discharged to said continuous member, wherein at least one of said induction units is capable of discharging product to said continuous member irrespective of gap between product and wherein another of said at least two induction units decreases in speed in response to said at least one of said induction units discharging product to said ~~merge~~continuous member irrespective of gap between product.

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 4

18. (Original) The sortation system in claim 17 wherein said another of said induction units performs an activation sequence after decreasing in speed.

19. (Currently Amended) The sortation system in claim 16 including A sortation system, comprising:

a sorter including a continuous member defining a plurality of transport positions of said continuous member;

a plurality of sort destinations for receiving product discharged from said continuous member;

an induction system comprising at least two induction units, each of said induction units having a receiving end for receiving product from a product source and a discharge end for discharging product to said continuous member;

a control determining gap between product that will be discharged to said continuous member, wherein at least one of said induction units is capable of discharging product to said continuous member irrespective of gap between product; and

a recirculation line from said continuous member to said receiving end of one of said induction units for recirculating product discharged to said merge with insufficient gap between the product.

20. (Original) The sortation system in claim 19 wherein said control monitors a proportion of product in recirculation.

21. (Original) The sortation system in claim 20 wherein said at least one of said induction units discontinues discharging product to said merge irrespective of gap if the proportion of product in recirculation exceeds a particular level.

22. (Original) The sortation system in claim 19 wherein said recirculation line substantially excludes product accumulation.

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 5

23. (Original) The sortation system in claim 22 wherein said recirculation line comprises substantially only belt conveyors.

24. (Currently Amended) The sortation system in claim 4617 wherein each of said induction units includes a plurality of tandem conveying units between said receiving end and said discharge end.

25. (Original) The sortation system in claim 24 wherein said control books at least one transport position for receipt of product from either of said induction units.

26. (Original) The sortation system in claim 25 wherein said control books a transport unit for a product when that product is at a booking conveying unit and adjusts relative spacing between product and the respective transport position booked for that product on ones of said conveying units downstream of said booking conveying unit, wherein multiple product can be booked on either of said induction units and awaiting discharge to said continuous member.

27. (Original) The sortation system in claim 25 wherein said control maintains any booking of transport units for product on one of said induction units notwithstanding variation in speed of said continuous member.

28. (Original) The sortation system in claim 27 wherein said control maintains any booking of transport units for product on one of said induction units notwithstanding a substantial halt in speed of said continuous member.

29. (Original) The sortation system in claim 24 wherein said conveying units are closed-loop regulated.

30. (Original) The sortation system in claim 24 wherein said conveying units are belt conveyors.

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 6

31. (Original) The sortation system in claim 24 wherein said conveying units have particular lengths and wherein said induction units are adapted to discharging product to said continuous member having a dimension that is greater than said particular lengths.

32. (Currently Amended) The sortation system in claim 17 wherein said at least two induction units have nominal speeds and wherein the nominal speed of at least one of said induction units follows said continuous member including starting as soon as said continuous member is moving and decreasing in speed only when said continuous member decreases in speed.

33. (Currently Amended) The sortation system in claim 32 wherein the nominal speed of the other of said induction units does not follow said continuous member and can decrease in speed irrespective of said continuous member.

34. - 57. (Previously Cancelled)

58. - 67. (Cancelled)

68. - 82. (Previously Cancelled)

83. (Cancelled)

84. (Currently Amended) The method of inducting of claim 83 A method of inducting product to a sorter, the sorter including a continuous member defining a plurality of transport positions of said continuous member and a plurality of sort destinations for receiving product discharged from said continuous member, comprising:
providing at least two induction units, each of said induction units including a plurality of tandem conveying units;

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 7

receiving product with each of said induction units from a product source and
discharging product from each of said induction units to the continuous member; and
determining gap between product that will be discharged to said continuous member
and at least occasionally discharging product from at least one of said induction units to
said continuous member irrespective of gap between product including decreasing a speed
of another of said at least two induction units in response to said at least one of said
induction units discharging product to said mergecontinuous member irrespective of gap
between product.

85. (Original) The method of inducting of claim 84 including performing an activation sequence after decreasing in speed said another of said induction units.

86. (Currently Amended) The method of inducting of claim 83 including A method of
inducting product to a sorter, the sorter including a continuous member defining a plurality
of transport positions of said continuous member and a plurality of sort destinations for
receiving product discharged from said continuous member, comprising:

providing at least two induction units, each of said induction units including a
plurality of tandem conveying units;

receiving product with each of said induction units from a product source and
discharging product from each of said induction units to the continuous member;

determining gap between product that will be discharged to said continuous member
and at least occasionally discharging product from at least one of said induction units to
said continuous member irrespective of gap between product; and

recirculating product discharged to said mergecontinuous member with insufficient
gap between the product.

87. (Original) The method of inducting of claim 86 including monitoring a proportion of product being recirculated.

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 8

88. (Original) The method of inducting of claim 87 including discontinuing discharging product to said merge irrespective of gap if the proportion of product in recirculation exceeds a particular level.

89. (Currently Amended) The method of inducting of claim 8384 wherein each of said induction units includes a plurality of tandem conveying units between said receiving end and said discharge end.

90. (Currently Amended) The method of inducting of claim 8384 including booking at least one transport position for receipt of product from either of said induction units.

91. (Original) The method of inducting of claim 90 including booking a transport position for a product when that product is at a booking conveying unit and adjusting relative spacing between product and the respective transport position booked for that product on ones of said conveying units downstream of said booking conveying unit.

92. (Original) The method of inducting of claim 90 including maintaining any booking of transport units for product on one of said induction units notwithstanding variation in speed of said continuous member.

93. (Original) The method of inducting of claim 92 including maintaining any booking of transport units for product on one of said induction units notwithstanding a substantial halt in speed of said continuous member.

94. (Currently Amended) The method of inducting of claim 8384 including closed-loop regulating said conveying units.

95. (Currently Amended) The method of inducting of claim 8384 wherein said conveying units are belt conveyors.

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 9

96. (Currently Amended) The method of inducting of claim 8384 wherein said conveying units have particular lengths and including at least occasionally discharging product to said continuous member having a dimension that is greater than said particular lengths.

97. (Currently Amended) The method of inducting of claim 8384 wherein said at least two induction units have nominal speeds, and further including following said continuous member with the nominal speed of said at least one of said induction units including starting said at least one of said induction units as soon as said continuous member is moving and decreasing in speed said at least one of said induction units substantially only when said continuous member decreases in speed.

98. (Currently Amended) The method of inducting of claim 97 including at least occasionally decreasing the nominal speed of the other of said induction units irrespective of the speed of said continuous member.

99. - 120. (Previously Cancelled)

121. - 133. (Cancelled)

134. (New) The sortation system in claim 19 wherein each of said induction units includes a plurality of tandem conveying units between said receiving end and said discharge end.

135. (New) The sortation system in claim 134 wherein said control books at least one transport position for receipt of product from either of said induction units.

136. (New) The sortation system in claim 135 wherein said control books a transport unit for a product when that product is at a booking conveying unit and adjusts relative spacing between product and the respective transport position booked for that product on ones of said conveying units downstream of said booking conveying unit, wherein multiple product

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 10

can be booked on either of said induction units and awaiting discharge to said continuous member.

137. (New) The sortation system in claim 135 wherein said control maintains any booking of transport units for product on one of said induction units notwithstanding variation in speed of said continuous member.

138. (New) The sortation system in claim 137 wherein said control maintains any booking of transport units for product on one of said induction units notwithstanding a substantial halt in speed of said continuous member.

139. (New) The sortation system in claim 134 wherein said conveying units are closed-loop regulated.

140. (New) The sortation system in claim 134 wherein said conveying units are belt conveyors.

141. (New) The sortation system in claim 134 wherein said conveying units have particular lengths and wherein said induction units are adapted to discharging product to said continuous member having a dimension that is greater than said particular lengths.

142. (New) The sortation system in claim 19 wherein said at least two induction units have nominal speeds and wherein the nominal speed of at least one of said induction units follows said continuous member including starting as soon as said continuous member is moving and decreasing in speed only when said continuous member decreases in speed.

143. (New) The sortation system in claim 142 wherein the nominal speed of the other of said induction units does not follow said continuous member and can decrease in speed irrespective of said continuous member.

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 11

144. (New) The method of inducting of claim 86 wherein each of said induction units includes a plurality of tandem conveying units between said receiving end and said discharge end.

145. (New) The method of inducting of claim 86 including booking at least one transport position for receipt of product from either of said induction units.

146. (New) The method of inducting of claim 145 including booking a transport position for a product when that product is at a booking conveying unit and adjusting relative spacing between product and the respective transport position booked for that product on ones of said conveying units downstream of said booking conveying unit.

147. (New) The method of inducting of claim 145 including maintaining any booking of transport units for product on one of said induction units notwithstanding variation in speed of said continuous member.

148. (New) The method of inducting of claim 147 including maintaining any booking of transport units for product on one of said induction units notwithstanding a substantial halt in speed of said continuous member.

149. (New) The method of inducting of claim 86 including closed-loop regulating said conveying units.

150. (New) The method of inducting of claim 86 wherein said conveying units are belt conveyors.

151. (New) The method of inducting of claim 86 wherein said conveying units have particular lengths and including at least occasionally discharging product to said continuous member having a dimension that is greater than said particular lengths.

Applicants : Artemio Affaticati and Claudio Cerutti
Serial No. : 10/796,877
Page : 12

152. (New) The method of inducting of claim 86 wher cin said at least two induction units have nominal speeds, and further including following said continuous member with the nominal speed of said at least one of said induction units including starting said at least one of said induction units as soon as said continuous member is moving and decreasing in speed said at least one of said induction units substantially only when said continuous member decreases in speed.

153. (New) The method of inducting of claim 152 including at least occasionally decreasing the nominal speed of the other of said induction units irrespective of the speed of said continuous member.